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U.S. DEPARTMENT OF AGRICULTURE

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HOMING PIGEONS THEIR CARE AND TRAINING



HOMING PIGEONS have wonderful ability to return to their homes, which is made use of for messenger service as well as for a sport. Remarkable records of endurance and speed have been made by such pigeons.

Pigeons kept for messenger service or racing should be carefully bred from a line of record performers.

In selecting birds for a race or flight only those in prime condition and perfect feather development, especially in the wings, should be used.

Thorough training is as essential as breeding in the successful management of homing pigeons. Only a little training should be given at a time and this thoroughly learned before longer flights are attempted.

The distance that pigeons will fly in one day depends on the weather as well as on their breeding. Young birds in good weather will fly about 300 miles in from seven to nine hours and flights of 600 miles in one day have been made by old birds.

Squabs are raised only **during** the natural breeding season, in the spring. The matings are made about February 1 and broken up about June 1, the males and females being kept separate during the rest of the year.

HOMING PIGEONS; THEIR CARE AND TRAINING.

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VARIED USES OF HOMING PIGEONS.

HOMING PIGEONS are very useful for service wherever the sending of messages is desired at points where telegrams or telephone communications are not available. Their use and value for this purpose were greatly utilized and their worth realized during the World War, when remarkable records of flight in carrying messages under great difficulties were made by pigeons.

During active warfare, telephone and radio communication are often interrupted in the zone of advance. Runners are delayed, visual signs are obscured by smoke and dust, and aerial observation is often subject to unfavorable weather conditions. Under these conditions pigeons can work regularly, in spite of bombardments, dust, smoke, or fog, and within a relatively short space of time bring accurate details about the situation or about troops in action. Some remarkable records of endurance in flight were made in France during the war. One case of supreme endurance was noted on October 21, 1918, in which a homing pigeon was liberated with an important message at Grand Pré at 2.35 p. m. during intense machine-gun and artillery action. This bird delivered its message to the loft at Rampont, a distance of 24.84 miles, in 25 minutes. One leg had been shot off and the breast had been injured by a machine-gun bullet, but even under these conditions the bird delivered its message.

In a storm-wrecked area in Texas, in 1919, a United States Army relief train was sent to Corpus Christi. Pigeons carried on this train were released and came through the storm and rain successfully, bringing the news of conditions and instructions about the relief. For two days after the radio had been set up and put in operation the pigeons were the only means of communication from this area, as atmospheric conditions were such that radio communication was not possible.

¹ Albert Jacobson, in charge of the breeding, management, and racing of the bureau's loft of homing pigeons, aided in preparing this bulletin.

HOMING PIGEONS AS A RECREATION OR SPORT.

Homing pigeons are kept rather extensively in different sections of the country, especially in villages, towns, and cities, and are bred largely as a recreation, hobby, or sport. The flying-pigeon associations have many members who are leaders in big business undertakings or hold high positions in professional lines.

Homing pigeons are descendants of the Rock pigeon and are the result of crossbreeding and selection from several varieties of pigeons. The ability to return home is a very remarkable trait and has been so developed that individual birds have returned home from a distance of more than 1,000 miles in two days, and flights of over 600 miles in a single day have been made. This development of the homing instinct is the result of both breeding and training, each of which is an important factor in the work. There is a difference of opinion as to the source of the faculty that enables pigeons to make these remarkable flights, but this characteristic has been developed to a remarkable degree by breeding, selection, and training.

SELECTION OF STOCK.

To make a success in the flying of homing pigeons it is important to procure stock which has performed well in competitive flights. It does not pay to breed from stray birds or birds of unknown parentage, as it takes about three years to determine the qualifications of a good homing pigeon for a 500-mile flight. Select a pigeon which has a good, broad skull, a long face, and a V-shaped beak. There is no standard color for homing pigeons, and color is not considered in selection and breeding except that white birds are undesirable because they can be readily seen by hawks. The body conformation of a pigeon greatly influences the distance it can fly, the long-keeled birds being better adapted for long flights and the short-keeled birds for short flights. The birds for the short flights must be very active, while the birds for long flights are slow, steady fliers and have great endurance. Poor condition in a bird is shown by a lack of luster in the eye, by the breaking of the luster of the feathers, particularly in the neck, and by the lack of adhesion in the wing feathers. The eyes should be prominent and bright. The eye is covered with three lids, the first one being used in storms and head winds; the bird can close this lid and still continue its flight. There is no standard eye color.

The wing is the most essential part of a pigeon that is to be used for record flying. When the wing is spread the feathers should overlap each other without any break, which is most noticeable in the curve at the top outer edge of the feather, especially in the first three primary flight feathers. (Fig. 1.) Good length of feathers is desirable, but the tail should not be too wide. The best tails are medium in width, tapering slightly toward the end. A pigeon has 12 tail flight feathers, consisting of 2 sets of 6, and has 10 primary and 10 secondary flight feathers in the wing. As the birds grow older, they sometimes have one or two extra secondary flight feathers. When the wing is spread it should make a straight line. The importance of the condition and character of the wing can not be too greatly emphasized.

MATING.

Pigeons mate in pairs and usually remain true to their respective mates as long as they are together. Natural mating, or allowing the pigeons to select their own mates is the method commonly followed in breeding homing pigeons. They should not be allowed to breed until they are well developed, preferably nearly a year old. Pigeons make the best breeders when they are from 1 to 3 years old and are



FIG. 1.—A wing in excellent condition, without any breaks and with all the feathers cleaving tightly together.

usually culled out very carefully after that age, although the best birds may be saved for several years. The breeders are mated about February 1 in the latitude of Washington, D. C., and kept mated until about the 1st of June, when the pairs are broken up and the males kept separate from the females during the rest of the year. In remating, pigeons are merely placed in the same pen unless it is desired to change the matings in some individual cases. In that case the newly mated pair should be placed in a different pen and the birds released on alternate days until they make a nest and lay

eggs, which is usually about 10 days after mating. Seventeen days are required to hatch pigeon eggs.

Inbreeding is not advised, and any natural matings of son to mother, father to daughter, or brother to sister should be changed and new matings made. A strong constitution and plenty of vigor are absolutely essential in the selection of flying pigeons, and all matings should furnish these characteristics. (Fig. 3.) The mating



FIG. 2.—A poor wing for flying, in which there are several breaks between feathers and the feathers do not cleave well together.

and selection should be based primarily on performance rather than on relationship.

The study of pedigrees showing breeding and performance is a very important part of the successful breeder's work. The best performers are usually those from the first hatch, which is in April, although those hatched during the other spring months often make excellent records. The objection to hatching pigeons in January and February in this section (Washington, D. C.) is that the birds are retarded in the growth of their feathers by the cold weather.

Birds hatched early have slower feather development than those hatched after the 1st of April. Pigeons from the second hatch make good birds, while the third hatch is only fair. After the third hatch it is not advisable to retain the young birds for breeding.

Many of the greatest winners have been bred from yearlings and 2-year-old birds. Good records are made by yearlings, but the best flights usually are by 2 and 3 year old birds; very few races are won after the third or fourth year. The older birds are especially

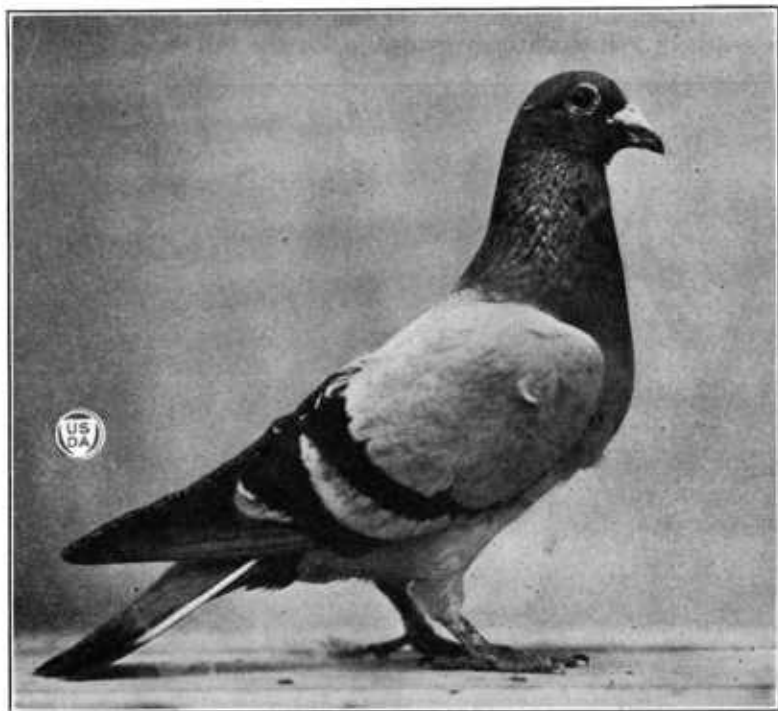


FIG. 3.—Blue Check cock, which flew 100, 200, 300, 400, and 500 miles in consecutive races in two successive years, and subsequently made a flight of 600 miles in one day.

good for long-distance races under adverse weather conditions. After a bird has performed successfully for three or four years it is too valuable as a breeder to be used for racing.

MOLTING.

Molting is very important in homing pigeons, as the condition of the feathers is such an important factor in flying. Squabs start to molt at 6 weeks and continue to change their feathers until fall. Molting is affected by the season that the bird is hatched, as well as by the management and feeding. Pigeons should have completed the molt before they are to be flown in a race, which makes it very essential to note the feather condition and molting of the bird a considerable time before the race. Under natural conditions the first primary flight feather drops six weeks after the hen lays

eggs, which leaves the bird with nine flight feathers if the eggs are allowed to hatch. This molt of the primary flight feather can be prevented by allowing the birds to sit for a week and then transferring their eggs to another nest. The birds will then begin nesting again and are kept from hatching eggs by this method.

The birds are separated in June to help them during the complete molt, which occurs in summer or early fall. Breeding and feeding young during the molt are too much of a physical strain on the bird. If any birds are hatched as early as January or February, the molt may be hastened by pulling out the last or end flight feather, so that new feathers will be entirely grown in for the fall races. If molting

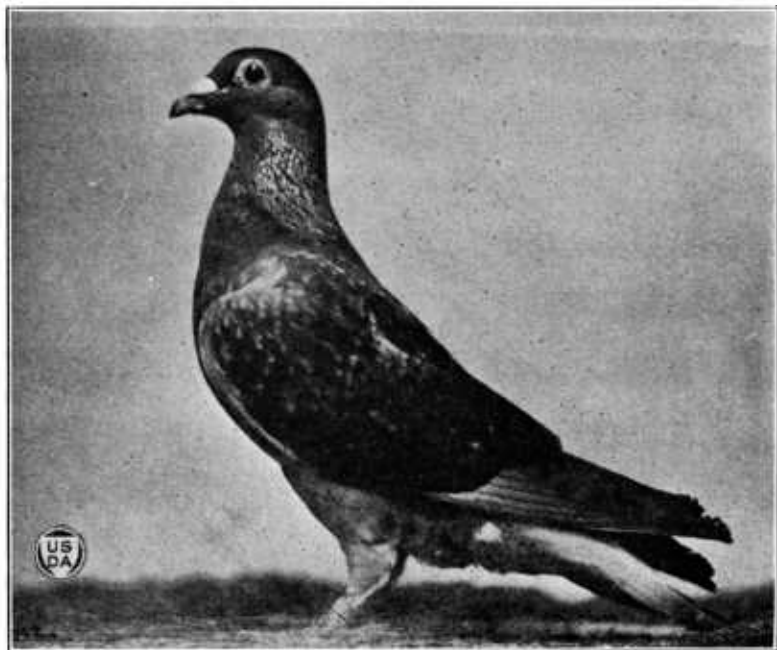


FIG. 4.—Hen which flew from Chicago, Ill., to Beltsville, Md., in 15 hours and 40 minutes, a distance of 580 miles, making a phenomenal record. This bird has flown in a great many races and holds the highest record in the Washington club by flying a total of 4,350 miles in races in two consecutive years.

is forced by this method, the second feather will be about one-fourth of an inch shorter than if it had molted naturally, but if allowed to molt naturally birds hatched at that time will have one feather lacking in the fall races.

SELECTION FOR RACES.

Only birds which are in the best feather condition should be selected for racing. The wing should be full, having 10 primary flights that are closely held together, and the neck should have a good sheen. The time of mating has a marked influence on the selection of birds for racing, so that careful records of the dates when the birds mate and lay should be kept. Those which have eggs or squabs in the nest will have an added reason for returning home, which is a

matter of importance, especially in long flights. Some of the most successful flights have been accomplished by pigeons which had been sitting from 8 to 10 days on eggs. The very best birds used for long races are usually not allowed to mate until five weeks before the longest race, so that their squabs will be about 10 days old at the time of the race. Flying pigeons should not be selected for long races when the squabs are about to hatch or until five days after hatching. However, they may be flown up to 200 miles at that time, although it is better not to use them at all in racing.

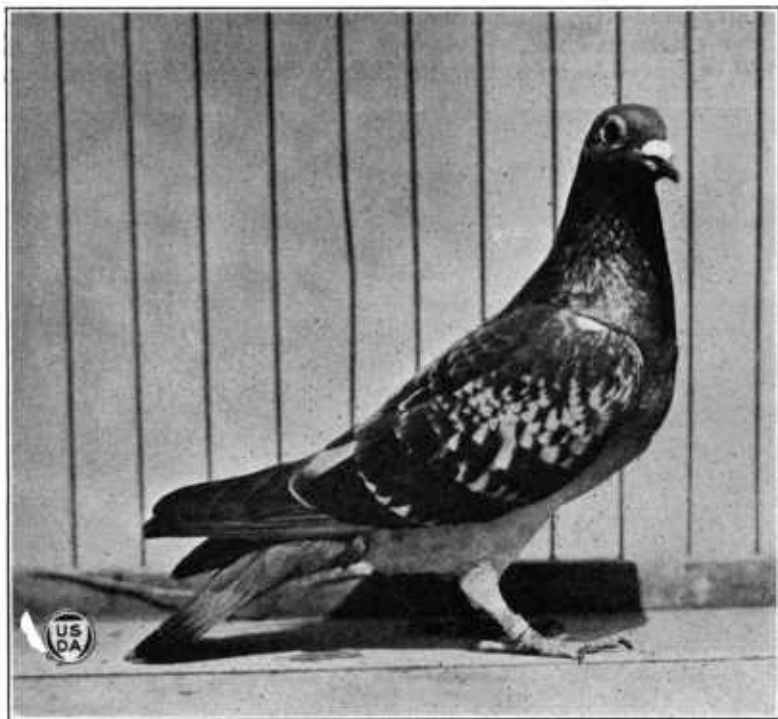


FIG. 5.—Winner of 500-mile race in 1921: Time of flight, 13 hours and 28 minutes. Also made excellent records in several other races.

Females often make the best racers, but it is essential to fly them only when they are in the proper breeding or mating stage. Male birds should not be sent away for flying at the time they are driving their mates. (Fig. 4.) Old birds will lay again when their young are from 3 to 4 weeks old and will feed their squabs until they are 4 or 5 weeks old. Six weeks after the second eggs are laid the bird drops one flight feather. The use of mating is essential to successful flying but must be timed according to the races.

TRAINING.

Training is as essential as breeding in the successful management of homing pigeons. The birds should be taught a very little at a time and should become thoroughly acquainted with that before

additional training is given. It is very essential that pigeons have complete confidence in their trainer. Their future performance depends very much on the care and attention they receive when reaching home. Home to the racing pigeon must mean the place where it gets good attention and plenty of feed.

The birds should be first left out of the loft in the evening when about 5 weeks old, and young pigeons should become thoroughly acquainted with the surroundings about the loft before they are taken away. All birds should be flown twice each day—as early in the morning and as late in the evening as possible. Birds should be released in a hungry condition, so that they will come back for feed after flying for about half an hour. If they do not exercise and fly freely, they should be forced to do so by whistling or waving a flag or stick near



FIG. 6.—Message holder which is placed on the pigeon's leg. A written message on thin paper is inside the holder.

the loft as they approach to alight. Care must be taken, however, not to frighten them at any time, especially in the vicinity of their home. Keep the traps open in the pigeon loft, so that the birds will be able to go in and feed immediately upon landing on the loft.

Pigeons are taken away for their first distance flight or "toss" after they have been flying from six to eight weeks about the loft. They should be put into a carrying basket on the previous night to accustom them to the basket. Take the basket about 1 mile away from home the next morning and release the birds without giving them any feed, so that they will be hungry. Release them one at a time, using great care in getting them out of the basket, letting them go very carefully. If pigeons are taught to fly in flocks, they will continue to fly by this method, while if taught to fly individually they are more likely to make better records in the races. Repeat this procedure several days later by putting the birds into the basket early in the morning and taking them 2 miles away from the loft in the direction in which they are to make their competitive flights.

Very careful training for short distances, especially for the first 5 or 10 miles, is essential for best results. The birds should not be taken away for the first time except on a favorable day, when there is no wind against which they will have to fly. This is usually referred to as a head wind, while a wind blowing in the direction which they are flying is called a tail wind.

The next flight should be a collective toss, all the birds being released together at a distance of 5 miles from the loft, the pigeons always being hungry when released so that they will return home. The distance can then be increased rapidly to 10, 15, 20, 25, 50, 75, and 100 miles, the training up to 25 miles being most important. Attention to minor details in training the young birds often results in the gaining of a few minutes in flights, which means winning instead of losing a race. For training, the birds should be released early in the morning and not in the heat of the day.

When the birds return to the loft, while being trained, they should be taught to go in quickly so that there will be no delay in timing them in a race. Some method of training the pigeons at feeding time, such as rattling feed in a can or whistling, should be used so they will know that this signal means that they are to be fed and will come into the loft immediately. Birds, both in training and in races, should be fed immediately upon returning to the loft and also should have fresh water. If there is no fresh water for birds when they return from a race, they are likely to stop on the road to get water during the race. Select locations for training flights which are on the direct line of flight or as near to it as possible so that the birds will fly home by the shortest course. Trained birds should be trained again the next year to get them in good flying condition and also to familiarize them with the course, but they will not need so intensive training for the first 25 miles as the young birds. Young birds which are intended to fly up to 500 miles in their second year should be flown only up to 100 miles as young birds and not farther than 300 miles as yearlings. Old birds well trained up to 100 miles can be flown from the 300, 400, and 500 mile stations without necessarily flying the distances between.

THE RACING OF PIGEONS.

Pigeon races are conducted through organized pigeon associations, the local associations having charge of the details of each race. The members of a local association compete among themselves in most of the contests, while occasionally interclub or intercity races are flown. Practically every local association belongs to some national association. There are three or four of these national associations, the largest of which has about 2,500 members, and is made up of a large number of local associations. Some local associations have as many as 400 members in their club or concourse.

Birds for racing must be in perfect feather condition, and the selection of the right birds for the race is very essential to success. In many of the pigeon clubs the number of birds which can be flown by any member in one race is limited to either 5 or 10 birds, so a very careful selection is essential.

Before the young birds are entered in their first race they should be fed and watered in the training crate or basket. This is done by placing them in the crate or basket in the evening, when they are hungry, where they are fed and watered so that they will be accustomed to being cared for in a crate before being shipped for a race. Baskets are generally used for training pigeons for short flights and large crates for long shipments.

The distance the pigeons will cover in one day depends on the weather as well as on their breeding and training. Pigeons ordinarily fly from daylight until dark, so that in a long-distance race it is very essential that they be released as early in the day as pos-

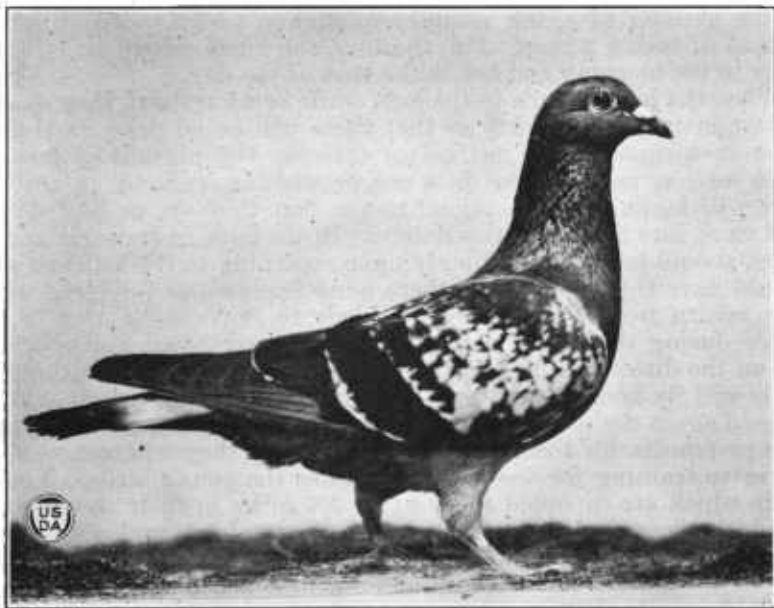


FIG. 7.—On May 28, 1921, this pigeon flew from Nappanee, Ind., to Beltsville, Md., a distance of 507.98 miles, in 13 hours and 38.4 minutes, being an average of 1,092.43 yards a minute. It also made excellent records in other races up to 400 miles.

sible. The birds stop flying at dark and find some roosting place, unless they are almost home. They can be trained to fly after sunset, keeping them out until nearly dusk, which will help them perform well in long races. Young birds in good weather will fly about 300 miles in from seven to nine hours, and old birds will cover about 600 miles in one day, which distance is about the limit of a day's flight; in fact, only a very small per cent of the birds will make even 500 miles in one day. During favorable weather some pigeons will fly 500 miles without stopping to eat or drink. In conditioning and training for a 500-mile race it is advisable to fly the birds up to 100 miles and then to allow an interval of one week, when the birds are given a 50-mile flight. This is followed the next week by a 200-mile flight, continuing the 50-mile trip after each higher 100-mile station, so that the birds only fly to the 100-mile stations every other week. This method keeps the birds in good flying condition and does not

wear them out. Some of the best 500-mile day records were made by pigeons trained by this method, jumping them from 200 to the 500 mile station. (Fig. 7.) The most successful records in the department's loft at Beltsville, Md., in the 400 and 500-mile races were made with pigeons jumped from the 100 to the 500-mile station.

Each local association appoints a race committee which is directly in charge of the details of each race. On account of the keen rivalry in pigeon races, it is necessary that great care be taken to prevent fraudulent work in the races. The seamless-band numbers of the pigeons to be entered in the race are recorded on the race sheet, and the birds are then turned over to the race committee, which examines the band numbers and then places its band or countermark on each

pigeon's leg, after which the bird is placed in the shipping crate and sent away to the station from which the race is to be flown. The countermark is a brass or rubber band, the number of which is known only to the racing committee. The birds are released early in the morning by a person selected by the race committee, who telegraphs this committee the exact time that the pigeons are released. The committee then notifies the club members, so that every member will know about what time to expect the birds to arrive home.

In stormy weather it

is often necessary to postpone a race for a day or longer, as the birds should not be released during a storm. In long-distance races, however, birds may be released under fair weather conditions but encounter a storm before they reach home.

Clocks used for timing homing pigeons are owned by each member and have to be turned in to the racing committee, where they are properly set, sealed, and returned to the owner before the race. There are several types of commercial clocks used for this purpose. When the birds return home during the race they are trapped and the association's countermark removed from their legs and placed in the clock, which is always set at 12 o'clock, with the second hand exactly on 60. The countermark automatically both starts and locks the clock. As a matter of a few minutes may mean the difference between winning and losing a race, the necessity for clocking



FIG. 8.—This pigeon made excellent records in four consecutive years, flying in races from 100 to 400 miles in each year.

the birds immediately upon their return home is apparent and any bird which has been frightened so that it does not go into the loft quickly upon returning home is handicapped in the race. (Fig. 9.)

When the countermark is inserted in the clock the owner must note on his report the time the bird arrived, according to his watch, in addition to the color, sex, and seamless-band number of the bird. If the clock when turned in to the club committee shows a variation, in flying time, exceeding three to five minutes in the time of the bird's arrival reported by the owner and the time determined by

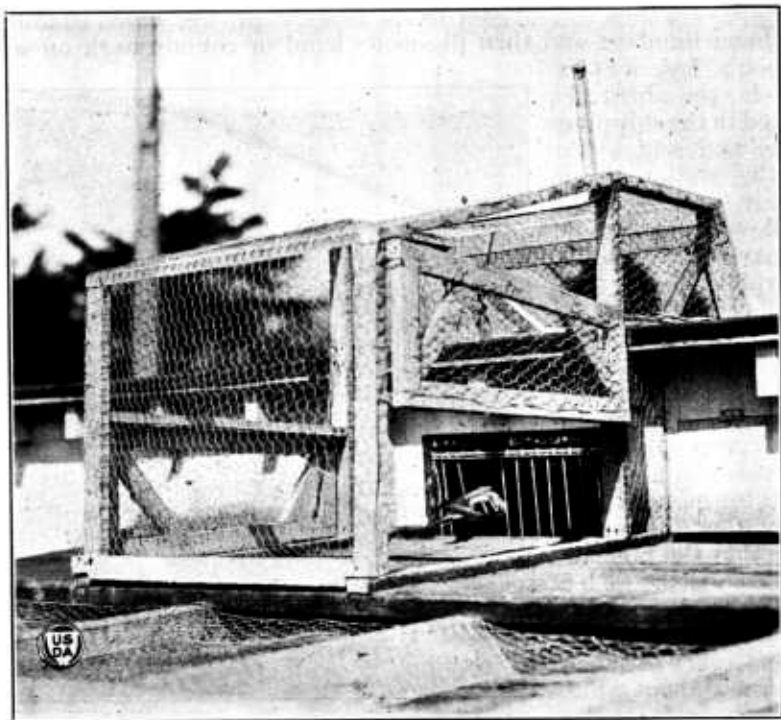


FIG. 9.—A pigeon entering the pigeon house through the bob wire. The wire frame is arranged to facilitate having the birds enter the loft quickly so that they may be driven in if necessary.

the clock, the bird is disqualified for that race. Most clubs have a rule that the clock must be turned in within a certain time after the first bird is clocked, usually allowing about one hour. As two or more birds may be recorded in the same clock, the member may wait for a while after the first bird is clocked, to see whether any other birds are coming, but can not exceed the time limit allowed.

The winning of the race is determined by calculating the average speed made by the birds, the distance to each loft of members in the club having previously been determined by actual map measurement. The distance in yards covered in the race is divided by the time consumed in minutes and the speed stated in so many yards a minute. For example, in a 100-mile race the winner shows a time consumed of $2\frac{1}{2}$ hours, or 150 minutes, which is divided into 100 miles,

or 176,000 yards, giving a speed of 1,173.33 yards a minute. Records as high as 2,200 yards a minute have been made when a strong wind was blowing in the same direction as the birds flew. Some contestants may have an "overfly," while others may have an "underfly," on account of the relative locations of their lofts in the town, this being determined by the measurement of the air-line distance—greater or less than the stated length of the race—from the starting point to the contestant's loft. Considerable difference of opinion exists as to the advantage or disadvantage of an "overfly." A location on the direct line of flight is usually considered best, because of the tendency of birds to fly together.

FEEDING.

Rations consisting of the very best feeds are used for homing pigeons, and a large proportion of this feed is made up of the higher-priced grains. The best grades of commercial feeds may be bought or homemade mixtures may be used. The ration should be adapted to the climate, less corn being fed in the South than in the North. The following is a good ration for the winter months, when the birds are not racing: 50 pounds small whole corn, 25 pounds Canada peas, 15 pounds kafir, and 10 pounds hempseed. A good ration to use during the racing season is 40 pounds Canada peas, 40 pounds large domestic vetch, and 20 pounds corn. Only the best grades of feeds should be used and it is especially necessary to see that the corn is thoroughly dried and in first-class condition. Argentine corn is smaller than American corn and is often used for pigeons, or the smaller kernels of American corn may be sorted out for this purpose. Some breeders even put their feed out in the sunshine to be sure that it is in good condition and perfectly dry, especially during the racing period. The feed used during racing should be started at least four weeks before the date, and no changes made except that an occasional feeding of canary seed and hempseed may be given and table rice may be included in these feeds. When the birds return from a race a small amount of hempseed and canary seed may be fed as a special relish, before giving the regular feed.

Breeding birds which are kept for reproduction may be fed a ration of equal parts by weight of corn, Canada peas, kafir, and hempseed, which can be used throughout the year except from August 1 to the latter part of October, which is the molting period, when from 1 to 2 per cent of flaxseed may be added. Feed for breeders may be kept before the birds all the time, but the feed for the flying birds should be given by hand twice daily on the floor of the loft. Plenty of pigeon grit should be kept before the pigeons, and fresh drinking water should be supplied frequently, especially during warm weather. The drinking vessels are usually arranged so that the birds can not get into them and dirty the water. Pans of water for bathing are generally used two or three days weekly in summer and once or twice a week in the winter; they are emptied after they have been in use for three or four hours. Bathing water is sometimes kept before the pigeons all the time but it must be changed often enough to keep it clean and free from scum, as the pigeons will drink out of the bath pans.

THE PIGEON PEN.

The loft for the pigeons should be arranged for convenience in handling the birds and so that it may be easily cleaned. Not more than 50 pairs of birds should be kept in one pen. It should be divided into two or more sections, one for young birds and one for old ones, and it is usually advisable to have an extra pen for breeders which are not used for racing. During the winter months, when each sex is kept separate, the old birds and the breeders can be put together. A double nest about 15 inches high, 12 inches wide, and 30 inches long should be provided for each pair of breeders, in which two nest bowls should be placed. The house should be arranged to provide plenty of ventilation and also to get sunshine well back into the room. Outside aviaries or wire-covered pens should be attached to the house, but these may be small, as homing pigeons are allowed to go outside of the aviary almost every day.

A series of wires in a frame, making what is called a "bob" wire, is generally used in the front of the loft, preferably just above the aviary, through which the pigeons enter to get into the loft. The pigeons learn to enter by pushing these wires inward, but are unable to get out from the pen, as the wires only open into the loft. The pigeons, therefore, can come in at any time, but can not go out. This bob-wire attachment can be purchased at a small price from a commercial pigeon supply company or a homemade device may be used, placing the wires $1\frac{1}{4}$ inches apart in the clear or 2 inches from centers. The openings should be arranged so that cats or other animals can not get into the loft. An electric alarm on dry cells is often used, attached to the bob wire, which will ring a bell when the pigeons return to the loft. The bathing pan can be kept to the best advantage in the outside aviary, which prevents dampness on the floor of the loft. A small catching pen is usually built just inside this opening so that pigeons can be quickly caught when they enter the loft after a race or while in training.

SANITATION AND DISEASES.

Homing pigeons are subject to the same diseases which affect other varieties of pigeons, but are comparatively free from all diseases. The stock should be carefully watched and any sick birds removed from the loft, treated, and not replaced until they are entirely well, if they are replaced at all. The house should be kept dry, clean, well ventilated, and free from drafts. Have the floor covered with 1 inch of sand or gravel and rake off frequently the manure which collects on the sand. The nests, nest boxes, and pens should be kept clean, but it is not advisable to disturb those nests which contain eggs or squabs any more than is necessary. The pens should be sprayed with whitewash containing a little crude carbolic acid or with a coal-tar disinfectant, and the nest boxes and perches should be examined for mites, especially in hot weather, and sprayed with kerosene oil or carbolineum, which will kill them. If the breeders have many lice ¹

¹ For further information on this subject, see Department Circular 213, *Eradication of Lice on Pigeons*.

on their bodies and wings, they should be treated with sodium fluorid, either dusting by the pinch method or dipping in a solution.

CANKER, "GOING LIGHT."

Canker and the disease or condition called "going light" seem to be more prevalent in pigeons than in the domestic fowl. Canker appears as sores or cheesy patches in the mouth and throat and can usually be prevented by providing good sanitary conditions and feeding only clean, sound grains and clean water. It may be treated by swabbing the mouth and throat with a solution of equal parts of hydrogen peroxid and water or by using dry sulphur. Ulcers sometimes appear on the head, around the bill, eyes, mouth, or in the throat. Usually pigeons thus affected should be killed. "Going light" often accompanies canker and is difficult to cure. It may be caused by feeding filthy or unsound grains, by insanitary conditions, or by any factor which tends to destroy the vitality of the pigeons.

ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE.

October 5, 1923.

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